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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/071,992

02/08/2002

Siegfried Mailaender

US 20 01 1067

2010

7590

09/10/2004

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EXAMINER

LEE, HWA S

ART UNIT

PAPER NUMBER

2877

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,992

Applicant(s)

MAILAENDER ET AL.

Examiner

Andrew Hwa S. Lee

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE filed 8/2/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-17 rejected under 35 U.S.C. 103(a) as being unpatentable over Dakin et al (US 6,490,045) in view of Hung.

As for **claim 1**, Dakin et al (Dakin hereinafter) shows a fiber optic sensor comprising:

a fiber connection (80, 110) to a DUT (90,100)

an optical circuit (for example 10-80) for providing an optical signal via said optical fiber to the DUT (90,100);

a shielding unit for holding the optical circuit and for providing at least a partial shielding of the optical circuit against mechanical noise (160).

As for **claims 2-6**, Dakin does not expressly show the details of the vibration isolating housing, however Hung shows that it is known in the prior art of using heavy damped tables and at the time of the invention, one of ordinary skill in the art would have utilized a heavy damped table in order to isolate the interferometer from external vibrations (column 2, lines 1-5). Although Hung teaches that a heavy damped table is not necessary, one of ordinary skill in the art would be motivated to do so in order to further isolate the optical circuit from vibration thus further improving signal quality.

As for **claims 7, 12, 13, and 16**, Solomon shows the use of additional damping devices and materials and at the time of the invention, it would have been obvious to one of ordinary skill in the art to place an additional damping device between the optical circuit and the shielding unit as it would have been well within the skill level of a skilled artisan to use various damping materials in different shapes, including rubber sheets, or other damping devices in between the shielding unit and the optical circuit in order to further isolate the interferometer from any vibration passing through the heavy damped table.

As for **claim 8**, the optical circuit is an interferometer.

As for **claims 9-11 and 17**, it would have been obvious to one of ordinary skill in the art to use a receiving device into order to hold the sensing fiber in the interferometer.

As for **claim 14**, the components of the interferometer provide substantially no vibration.

As for **claim 15**, Dakin shows all element as claimed in claim 1 in addition to:

an optical signal source (10) and

an optical receiver (150).

Response to Arguments

3. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Hwa S. Lee whose telephone number is 571-272-2419. The examiner can normally be reached on Tue-Fr.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley Jr. can be reached on 571-272-2800 ext 77. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Andrew H. S. Lee
Art Unit 2877